

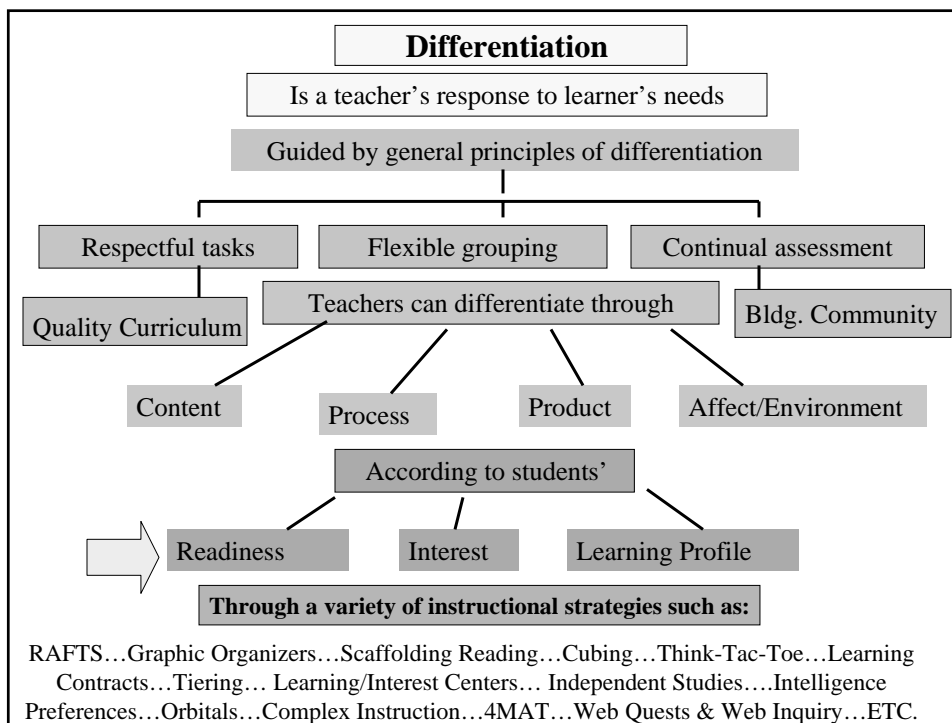
# Differentiation in Action: Teachers at Work (Part 2)



**Learning Network NZ  
Auckland, NZ**

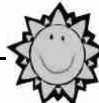
**October 20, 2006**

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University of Virginia  
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<p><u>Reading Homework Coupon</u></p> <p>Name:</p> <p>Date:</p> <p><input type="checkbox"/> Please ask your child to tell you the story in the book he or she brought home today by looking at the pictures.</p>	<p><u>Reading Homework Coupon</u></p> <p>Name:</p> <p>Date:</p> <p><input type="checkbox"/> Please echo read the book your child brought home. (Echo reading means you read a line, then your child reads or echoes the same line.)</p> <p><input type="checkbox"/> Ask your child to show you some words in the story he or she recognizes.</p>
<p><u>Reading Homework Coupon</u></p> <p>Name:</p> <p>Date:</p> <p><input type="checkbox"/> Ask your child to read with expression as if he or she were reading to entertain someone,</p> <p><input type="checkbox"/> Ask your child to give you several reasons why he or she likes (or dislikes) the book.</p> <p><input type="checkbox"/> Have your child tell you what feelings the character in the book has. Ask for evidence from the book.</p>	<p><u>Reading Homework Coupon</u></p> <p>Name:</p> <p>Date:</p> <p><input type="checkbox"/> Ask your child to read with a different voice for each character</p> <p><input type="checkbox"/> After the reading, ask how your child decided on how his/her voice could help you know the various characters better.</p> <p><input type="checkbox"/> Ask your child to tell you which character would be most fun to spend time with. Ask for reasons for his/her choice.</p>

Adapted from Managing A Diverse Classroom by Carol Cummings - by Tomlinson '02



## DOUBLE ENTRY JOURNAL

### (Basic)

As You Read, Note:	After You Read, Explain:
<p>.....</p> <ul style="list-style-type: none"> <li>• Key phrases</li> <li>• Important words</li> <li>• Main ideas</li> <li>• Puzzling passages</li> <li>• Summaries</li> <li>• Powerful passages</li> <li>• Key parts</li> <li>• Important graphics</li> <li>• Etc.</li> </ul>	<p>.....</p> <ul style="list-style-type: none"> <li>• How to use ideas</li> <li>• Why an idea is important</li> <li>• Questions</li> <li>• Meaning of key words, passages</li> <li>• Predictions</li> <li>• Reactions</li> <li>• Comments on style</li> <li>• Interpretation of graphics</li> <li>• Etc.</li> </ul>

# DOUBLE ENTRY JOURNAL

## (Advanced)

### As You Read

- Key passages
- Key vocabulary
- Organizing concepts
- Key principles
- Key patterns
- Links between text & graphics

### As/After You Read


- Why ideas are important
- Author's development of elements
- How parts and whole relate
- Assumptions of author
- Key questions

### After You Read

- Teacher
- Author
- Expert in field
- Character
- Satirist
- Political cartoonist
- Etc.

### Split Journal for Math

#### Basic Version

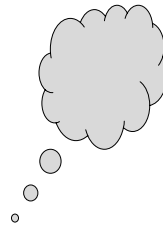
Problem	Strategy #1 for Solving the Problem	Strategy #2 for Solving the Problem	Solving and Explaining a Real World Application of the Problem
Find the missing side of a triangle 	Trig  (Explain)	Pythagorean Theorem  (Explain)	Will a tree of <u>X</u> dimensions hit a house of <u>X</u> distance away if it's cut down?

# DOUBLE ENTRY JOURNAL

(Basic)

WHAT I SAW OR HEARD

WHAT I THINK...



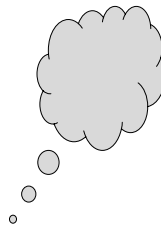
# DOUBLE ENTRY JOURNAL

(Advanced)

WHAT I SAW /  
HEARD

WHAT I THINK

WHAT -----  
WOULD THINK



## Play Around with the Ideas....



*How can you use some of these strategies in your classroom to teach varied learners more effectively?*

## Learning Contracts

Contracts take a number of forms that begin with an agreement between student and teacher.

The teacher grants certain freedoms and choices about how a student will complete tasks,

and the student agrees to use the freedoms appropriately in designing and completing work according to specifications

Strategy: Learning Contracts

## Writing Bingo

Try for one or more BINGOs this month. Remember, you must have a real reason for the writing experience! If you mail or email your product, get me to read it first and initial your box! Be sure to use your writing goals and our class rubric to guide your work.

Recipe	Thank you note	Letter to the editor	Directions to one place to another	Rules for a game
Invitation	Email request for information	Letter to a pen pal, friend, or relative	Skit or scene	Interview
Newspaper article	Short story	FREE Your choice	Grocery or shopping list	Schedule for your work
Advertisement	Cartoon strip	Poem	Instructions	Greeting card
Letter to your teacher	Proposal to improve something	Journal for a week	Design for a web page	Book Think Aloud

## Math Ticket

### Graphics

Tangram Ex (p.14#1)

Tangram Ex (p.11,#9)

Geoboard Pentagon

Geoboard Hexagon

### Math Writing

•Explain in clear step by step way how you:

\*Solved your problem of the day or solved your Tangram/Geoboard challenge

\*Use pictures and words to teach someone how to do one of your five math tasks

### Problem of the Day

Complete the odd # problems from the POD board.

### Math with Legs

Develop a real problem someone might have which graphing might help them. Explain and model how it the problem & solution would work.

### Computer

Complete the blue task cards

### Teacher Feature

When you are called

## Novel Think-Tac-Toe *basic version*

Directions: Select and complete one activity from each horizontal row to help you and others think about your novel. Remember to make your work thoughtful, original, accurate, and detailed.

Theme	Character	Create a pair of collages that compares you and a character from the book. Compare and contrast physical and personality traits. Label your collages so viewers understand your thinking.	Write a bio-poem about yourself and another about a main character in the book so your readers see how you and the characters are alike and different. Be sure to include the most important traits in each poem.	Write a recipe or set of directions for how you would solve a problem and another for how a main character in the book would solve a problem. Your list should help us know you and the character.
	Setting	Draw/paint and write a greeting card that invites us into the scenery and mood of an important part of the book. Be sure the verse helps us understand what is important in the scene and why.	Make a model or map of a key place in your life, and an important one in the novel. Find a way to help viewers understand both what the places are like and why they are important in your life and the characters'.	Make 2 timelines. The first should illustrate and describe at least 6-8 shifts in settings in the book. The second should explain and illustrate how the mood changes with the change in setting.
	Theme	Using books of proverbs and/or quotations, find at least 6-8 that you feel reflect what's important about the novel's theme. Find at least 6-8 that do the same for your life. Display them and explain your choices.	Interview a key character from the book to find out what lessons he/she thinks we should learn from events in the book. Use a Parade magazine for material. Be sure the interview is thorough.	Find several songs you think reflect an important message from the book. Prepare an audio collage. Write an exhibit card that helps your listener understand how you think these songs express the book's meaning.

## Novel Think Tac-Toe

### *advanced version*

Directions: Select and complete one activity from each horizontal row to help you and others think about your novel. Remember to make your work thoughtful, original, insightful, and elegant in expression.

Theme	Character	Write a bio-poem about yourself and another about a main character in the book so your readers see how you and the character are alike and different. Be sure to include the most important traits in each poem.	A character in the book is being written up in the paper 20 years after the novel ends. Write the piece. Where has life taken him/her? Why? Now, do the same for yourself 20 years from now. Make sure both pieces are interesting feature articles.	You're a "profiler." Write and illustrate a full and useful profile of an interesting character from the book with emphasis on personality traits and mode of operating. While you're at it, profile yourself too.
	Setting	Research a town/place you feel is equivalent to the one in which the novel is set. Use maps, sketches, population and other demographic data to help you make comparisons and contrasts.	Make a model or a map of a key place in your life, and in important one in the novel. Find a way to help viewers understand both what the places are like and why they are important in your life and the characters'.	The time and place in which people find themselves and when events happen shape those people and events in important ways. Find a way to convincingly prove that idea using this book.
	Theme	Find out about famous people in history or current events whose experiences and lives reflect the essential themes of this novel. Show us what you've learned.	Create a multi-media presentation that fully explores a key theme from the novel. Use at least 3 media (for example painting, music, poetry, photography, drama, sculpture, calligraphy, etc.) in your exploration.	Find several songs you think reflect an important message from the book. Prepare an audio collage. Write an exhibit card that helps your listener understand how you think these songs express the book's meaning.



## Science Agenda on Chemical Problems in the Environment

### IMPERATIVES (You must do these...)

- 1) Select a chemical problem in the environment and
  - Define and describe the difficulties it presents
  - Be sure to discuss why, where, and to whom/what

Your choices are:

  - Global Warming/Greenhouse Effect
  - Ozone Depletion
  - Acid Rain
  - Air Pollution
  - Water Pollution (including thermal pollution and land/ground pollution)
- 2) Complete a map showing where the problem exists, what/who is affected by it, and the degree of impact
- 3) Develop a talking paper that describes present and future solutions, as well as your recommendations.

### NEGOTIABLES (You must do at least one of these...)

- 1) Determine the approximate costs of the problem of one badly affected region and develop a graphic that shows total costs and what makes the costs (for example: Health costs, clean-up costs, lost revenues from land, etc.)
- 2) Develop a timeline of the evolution of the problem over the last 100 years, including significant dates, and factors that contributed to the change. Take the timeline into the future based on your current understanding of trends associated with the problem.

### OPTIONS (You may do one or more of these...)

- 1) Create a Gary Larson-type cartoon or an editorial cartoon that makes a commentary on the problem.
- 2) Prepare a fictionalized account, but based on scientific fact, of a person who lives in a badly affected area. Your goal is to put a human face on the problem.
- 3) Develop a 60-second public service announcement (taped) to raise audience awareness of the problem and introduce positive actions citizens might take to improve the prognosis for the future.





Name \_\_\_\_\_

## Poetry Contract

<u>Creating a Rhyming Wheel</u> <input type="radio"/> Use your spelling lists as a way to get started	<u>Use Your Rhyming Wheel</u> <input type="radio"/> To write a poem that sounds like Shel Silverstein might have written it	<u>Write an Acrostic Poem</u> <input type="radio"/> Be sure it includes alliteration
<u>Write</u> <input type="radio"/> A cinquain (check that you have the right pattern)	<u>Computer Art</u> <input type="radio"/> Use kid pix or other clip art to illustrate a simile, metaphor, or analogy on our class list, or ones you create	<u>Write About You</u> <input type="radio"/> Use good descriptive words in a poem that helps us know and understand something important about you
<u>Interpret</u> <input type="radio"/> "How to Eat a Poem"	<u>Research a Famous Person</u> <input type="radio"/> Take notes, Write a clerihew that uses what you learned	<u>Illustrate a Poem</u> <input type="radio"/> Find a poem we've read that you like, illustrate it to help show its meaning.
Student choice #1 <input type="radio"/> _____ _____	Student choice #2 <input type="radio"/> _____ _____	Student choice #3 <input type="radio"/> _____ _____

Name \_\_\_\_\_

## Poetry Contract

<u>Creating a Rhyming Wheel</u> <input type="checkbox"/> Use your vocabulary lists as a way to get started	<u>Use Your Rhyming Wheel</u> <input type="checkbox"/> To write a poem that includes humor that would make Shel Silverstein smile	<u>Write an Acrostic Poem</u> <input type="checkbox"/> Be sure it includes alliteration, onomatopoeia, and allusion
<u>Write</u> <input type="checkbox"/> A diamante (check that you have the right pattern)	<u>Computer Art</u> <input type="checkbox"/> Use kid pix or other clip art to illustrate a simile, metaphor, & analogy for one idea or image.	<u>Write About You</u> <input type="checkbox"/> Use good figurative language in a poem that helps us know and understand something important about you
<u>Interpret</u> <input type="checkbox"/> "Unfolding Bud"	<u>Research a Famous Person</u> <input type="checkbox"/> Take notes, Write a bio-poem that uses what you learned	<u>Illustrate a Poem</u> <input type="checkbox"/> Find a poem we've read that you like. Illustrate it to help reveal its meaning.
Student choice #1 <input type="checkbox"/> _____ _____	Student choice #2 <input type="checkbox"/> _____ _____	Student choice #3 <input type="checkbox"/> _____ _____

## From Level 1 2

Write the poems about a topic you care about to help you think about that topic more fully and to express your ideas and interest

- KNOW: haiku, cinquain, etc.
- UNDERSTAND:
  - Poets explore things that matter to them.
  - Poetry helps us and the poet understand self and world.
- DO:
  - Write with expression
  - Use effective mechanics

## Level 2 Level 3

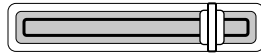
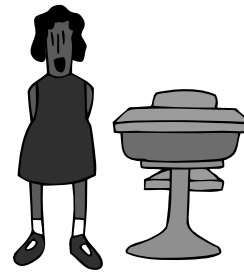
**Concepts:** evolution, exploration, expression, perspective

- As we explore ideas the ideas evolve & so do we.
- Exploration leads to understanding.
- Exploration of varied perspectives broadens our understanding.
- Expression reveals the writer.

# Up & At 'EM

**Please tell someone near you what you see as potential positives and negatives of learning contracts for your students.**

**AND, please stand as you share your ideas.**

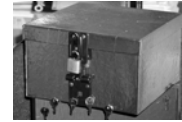


## Tiered Assignments

- In a differentiated classroom, a teacher uses varied levels of tasks to ensure that students explore ideas and use skills at a level that builds on their prior knowledge and prompts continued growth.
- While students work at varied degrees of difficulty on their tasks, they all explore the essential ideas and work at high levels of thought.
- Assessment-based tiering allows students to work in their "Zones of Proximal Development" or in a state of "moderate challenge."



## Tiering



- IS differentiation according to *readiness*
- Uses groups based upon students' readiness for a *particular task*
- Is driven by **pre-assessment**.
- Is NOT locking students into “ability boxes” because groups are *flexible* and vary according to the task
- Is NOT the only kind of differentiation, although it is foundational to addressing readiness needs.

## Varied Journal Prompts

- A. A classmate had to leave the room today just as the lab experiment was beginning to come to a conclusion. Please write that student a note explaining what happened in the lab, why it happened, and what practical use there is in the real world for what the experiment shows us. You're his/her only hope for clarity! Be as much help as possible.
- B. Select a key or critical element in the experiment today. Change it in some way. What will happen in the experiment with that change? Why? What principle can you infer? Be sure you go for something useful, insightful, and intellectually or scientifically meaningful at your choice.

# Varied Journal Prompts

- A. You are a relatively wealthy white male in the month of the 2004 presidential election. Who will you vote for and why (if you are typical of that group)? Now, who will you vote for if you are typical representative of the following groups (and why):



- a relatively wealthy Hispanic female
- a poor Hispanic male, 26
- a poor white female, 30
- a middle class African American male, 50
- a middle class, elderly, white male, 80
- another category of your choice

- B. You are in a town meeting the month of the 2004 presidential election. The group of six talking together comes from varied age groups, regions, ethnic groups, jobs and socioeconomic status. Each is typical of a category of voters. Create the group. In both written and graphic form, indicate who they will vote for, why, and how they are likely to feel about their choice 4 years later.

## Book Match

### Learning Objective

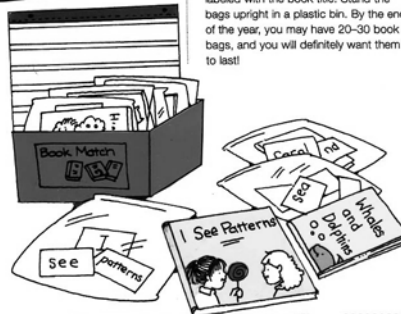
Mastering basic concepts of print (word matching, word recognition, and identifying word boundaries)

#### Materials

- ☐ familiar children's books
- ☐ sentence strips
- ☐ scissors
- ☐ large resealable plastic bags
- ☐ tagboard
- ☐ plastic bin
- ☐ pocket chart

#### Presentation and Storage

Copy the text of a familiar book on sentence strips to provide additional reading opportunities without the support of illustrations. (Taking away the illustrations does not make a reading experience more valid, it just makes it different!) Cut the sentences into words, color-code each set, and store sets in resealable bags. (Color-coding makes it easier to return errant cards to their proper bags.) Put in the bag one copy of the book and a piece of tagboard labeled with the book title. Stand the bags upright in a plastic bin. By the end of the year, you may have 20-30 book bags, and you will definitely want them to last!



What are the Other Kids Doing... while you teach small groups

Book Match 59

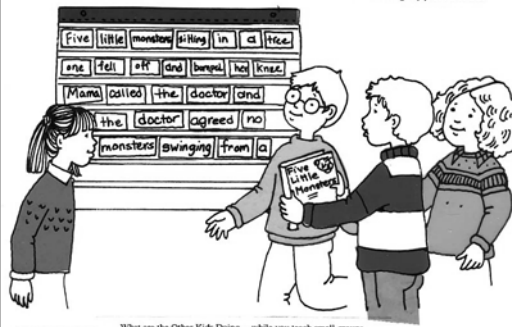
### Process

Students arrange the words in a pocket chart using the book as a model. Once the story has been reconstructed, students read it to other students or to parent volunteers. This is one of the few learning centers that does not yield a product of student learning. You may ask students to leave the cards in place for you to check at a later time. However, you may prefer to have students pack up the cards as soon as they finish to keep the pocket chart free for other children. Once the book is read and reassembled properly, the student's learning goal has been reached.

### Helpful Hints

Have students prepare sentence strips based on books from their Book Clubs. This will save you time and reinforce reading and writing. You may also wish to present text in this format when preparing to do a story innovation or copy-change.

This learning activity is most appropriate for emergent and very early readers. Once students are reading books that are 16 or more pages, they may have outgrown this activity. Also, if you have ever tried to reconstruct a long book one word at a time, you will probably agree that it is a very tedious process. Students who are reading longer texts need different learning opportunities.



What are the Other Kids Doing... while you teach small groups  
Donna Marriott • Creative Teaching Press, Inc. • 1997

## HIGH SCHOOL TIERD LESSON: PHYSICS

**KNOW:** Basic Vocabulary (e.g., efficiency, force, velocity, mass, friction)

**UNDERSTAND:** Aerodynamics are improved by proper manipulation of area, mass, & friction.

**DO:** Construct objects that project themselves through space in the different directions as a demonstration of effective manipulation of the objects' area, mass, & friction

♦ **Paper Airplanes**

- ♦ That fly for distance
- ♦ That fly for hang time
- ♦ That fly for tricks

♦ **Kites**

- ♦ Box
- ♦ Diamonds
- ♦ Triangle
- ♦ Layered

♦ **Pin Wheel:** Tilt propellers different ways to create:

- ♦ Forward motion
- ♦ Backward Motion
- ♦ Upward Motion

Easier

↓  
Harder

Easier

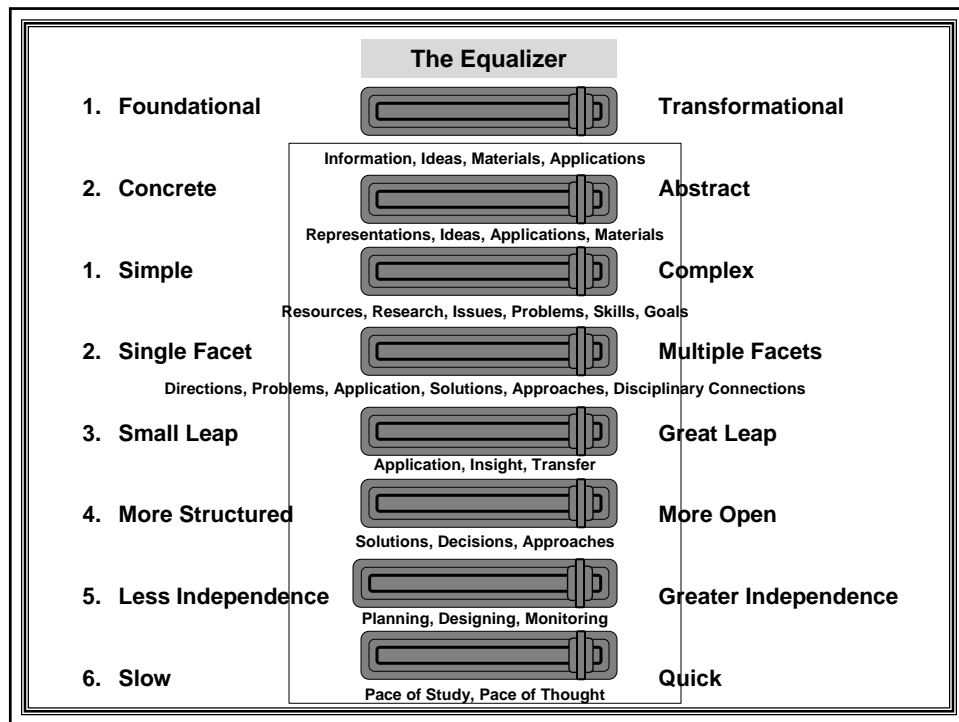
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Harder

Easier

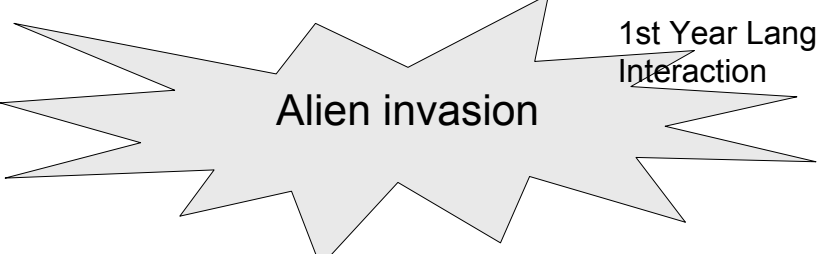
↓  
Harder



*Great opportunity to make teams of theoreticians, scholars, designers and builders.*



1st Year Language Interaction




## Alien invasion

*Provide each student with a sheet of "aliens" with varied numbers of arms, legs, eyes, noses, mouths, and ears.*

### Target Group

Student A selects one of the aliens. Student B asks questions in an attempt to figure out which Alien student A selected. Student A answers the questions in complete sentences. All questions must be "yes" "no" questions having to do with the aliens' features. Students then switch roles.



### Advanced Group

Student B also asks questions about why the alien is formed as it is. Student A makes up responses. In the end, the students write a descriptive statement about the structure and function of the alien. Students then switch roles.

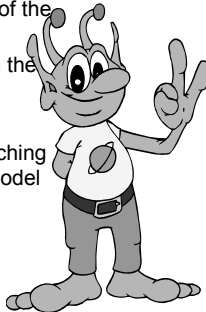
## Alien invasion

1st Year Language  
Interaction

### Struggling Group

If there are students who cannot succeed with the Target Activity, the teacher can provide one of the following:

1. A list of possible questions in the language
2. A list of helpful vocabulary
3. A brief period of teacher coaching to help students develop a model for the task



Following this initial activity, students design, describe and name their own alien.

These are displayed in the classroom and the whole class engages in a questioning activity to determine who created each alien.

(For example: Does William's alien have four ears? Does William's alien have long legs?)

*Based on a differentiated Spanish I activity developed by Ellie Gallagher, Park City Utah and Enhancing Foreign Language Instruction in Your Classroom by Barbara Snyder*

## New World Explorers

### KNOW

- Names of New World Explorers
- Key events of contribution

### UNDERSTAND

- Exploration involves
  - risk
  - costs and benefits
  - success and failure

### Do

- Use resource materials to illustrate & support ideas





## New World Explorers



Using a teacher-provided list of resources and list of product options, show how 2 key explorers took chances, experienced success and failure, and brought about both positive and negative change. Provide proof/evidence.

Using reliable and defensible research, develop a way to show how New World Explorers were paradoxes. Include and go beyond the unit principles

## Tiered Science Lab



Subject: Science

Concepts: Density & Buoyancy

Introduction: All students take part in an introductory discussion, read the chapter, and watch a lab activity on floating toys.

Activities Common to All Three Groups

- Explore the relationship between density and buoyancy
- Determine density
- Conduct an experiment
- Write a lab report
- Work at a high level of thinking
- Share findings with the class

## The Soda Group



- Given four cans of different kinds of soda, students determined whether each would float by measuring the density of each can.
- They completed a lab procedure form by stating the materials, procedures, and conclusions. In an analysis section, they included an explanation of why the cans floated and sank, and stated the relationship between density and buoyancy.

## The Brine & Egg Group



- Students developed a prescribed procedure for measuring salt, heating water, dissolving the salt in the water, cooling the brine, determining the mass of water, determining the mass of an egg, recording all data in a data table, pouring the egg on the cool mixture, stirring the solution and observing.
- They answered questions about their procedures and observations, as well as questions about why a person can float in water, whether it is easier to float in fresh or seawater, why a helium filled balloon floats in air, and the relationship between density and buoyancy.

## The Boat Group



- Students first wrote advice to college students building concrete boats to enter in a boat race.
- They then determined the density of a ball of clay, drew a boat design for a clay boat, noting its dimensions and its density.
- They used cylinders of aluminum, brass, and steel as well as aluminum nails for cargo, and determined the maximum amount of cargo their boat could hold.
- They built and tested the boat and its projected load.
- They wrote a descriptive lab report to include explanations of why the clay ball sank, and the boat was able to float, the relationship between density and buoyancy, and how freighters made of steel can carry iron ore and other metal cargo.

### Tiered Lesson

#### Elementary Physical Education

→ *SKILL: Dribbling and basketball*

①

- Dribble from point A to point B in a straight line with one hand
- Switch to the other hand and repeat.
- Use either hand and develop a new floor pattern from A to B (not a straight line)



②

ZIGZAG –

- One hand
- Other hand
- Increased speed
- Change pattern to simulate going around opponents



③

In and out of pylons as fast as possible

- Change hand
- Increase speed

④

Dribble with one hand – and a partner playing defense.

- Increase speed and use other hand
- Trade roles

⑤

Through pylons, alternating hands, & partner playing defense

- Increase speed
- Trade roles

# Secondary Tiered Assignment

<p><u>Concept:</u> Responsibility</p> <p><u>Generalizations:</u></p> <ul style="list-style-type: none"> <li>We are responsible for ourselves.</li> <li>We "write" our own lives.</li> <li>We have responsibility for those we "tame."</li> <li>Our actions have a ripple effect.</li> <li>Responsibility may require sacrifice and may result in fulfillment.</li> <li>Our work bears our hallmark.</li> </ul> <p><u>Skills:</u></p> <ul style="list-style-type: none"> <li>Argument and support</li> <li>Effective use of figurative language</li> <li>Editing skills</li> <li>Literary analysis</li> </ul> <p><u>Key Vocabulary:</u></p> <ul style="list-style-type: none"> <li>Elements of literature</li> <li>Genre traits</li> <li>Voice</li> </ul> <p><u>Sample Literature:</u></p> <ul style="list-style-type: none"> <li>The Little Prince</li> <li>Anne Frank by Miep Gies</li> <li>'Bloodstain'</li> <li>'I Will Create'</li> <li>'To Be' Soliloquy</li> <li>News Articles</li> </ul>	<p><u>Samples of Differentiation</u></p> <ul style="list-style-type: none"> <li>Both teacher assigned and student selected reading.</li> <li>Both teacher assigned and student selected journal prompts.</li> <li>Use of literature circles to discuss books/readings assigned by readiness.</li> <li>Use of small group, teacher-led focus groups on student-choice readings/</li> <li>Optional review groups on key vocabulary and skills.</li> <li>In-common and "negotiated" criteria for key writing.</li> <li>Product options.</li> <li>Use of tape recordings, shared reading on complex pieces.</li> <li>Varied work groups.</li> <li>Tiered lesson.</li> </ul>
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# Secondary Tiered Assignment

<p style="text-align: center;"><u>Assignment</u></p> <ul style="list-style-type: none"> <li>Students will analyze parallel pieces of writing to explore the premise that we are responsible for those we tame. Students will frame an argument to support their position.</li> </ul> <p><u>Group 1</u></p> <p>Read pages from <u>The Little Prince</u></p> <ul style="list-style-type: none"> <li>Complete an analysis matrix that specifies the fox's feelings about responsibility toward those we tame and why he believes what he does.</li> </ul> <p>Read <u>Bloodstain</u></p> <ul style="list-style-type: none"> <li>Complete an analysis matrix on the beliefs of the main character on the same topic.</li> <li>Select a newspaper article from the folder.</li> <li>Write a paragraph or two that compares beliefs of people in the article with the two characters.</li> <li>What advice would you give children about responsibility toward people we tame?</li> <li>Brainstorm on paper and then either:</li> <li>Write a letter to a child giving your advice.</li> <li>Write guidelines for adults who affect children's lives.</li> <li>Draw and explain a blueprint for becoming a responsible person.</li> <li>Peer revise and then peer edit your work.</li> </ul>	<p><u>Group 2</u></p> <p>Read pages from <u>The Little Prince</u></p> <ul style="list-style-type: none"> <li>Find at least one piece of writing that shares the fox's view on responsibility for those we tame.</li> <li>Find at least 2 contrasting pieces.</li> <li>Your selections must include at least 2 genre.</li> <li>Develop notes on 2 views of responsibility with reasons and illustrations from your selections.</li> <li>Be sure you are thoughtful about each view.</li> </ul> <p>Then either:</p> <ul style="list-style-type: none"> <li>Write an editorial about the implications of the two approaches for our school.</li> <li>Write an interior monologue of a teen at a point of decision about responsibility for someone he/she has tamed.</li> <li>Create a series of editorial cartoons that look at the ripple effect of such decisions in history, science, and our community.</li> </ul>
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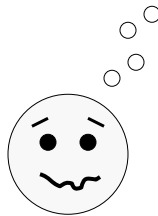


# The Voices in my Head...








Potential  
benefits of  
tiering...

Potential  
drawbacks of  
tiering...

I need more  
help or  
information...



## Mission Setup

<u>ALLIES</u>		
	Starbases	3
	Outposts	9
	Kigons	5
<u>ENEMIES</u>		
	Rulan Warbirds	15
	Rulan Superhawks	5
	Cardaian Destroyers	5
	Fengi Marauders	1

- ☐ Cube ship
- ☐ Cluster similar types

### Select a mission:

- ☐ The Cadet's Game
- ☐ The Lieutenant's Game
- ☒ The Captain's Game
- ☐ The Admiral's Game
- ☐ Custom

Mission Rank : Captain

Cancel

OK



## Choose Your Perspective

**How Do You Currently Address Varied Readiness Needs?**

- 
- 
- 

-OR-

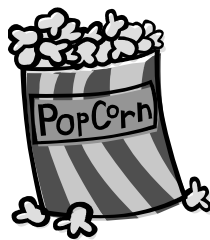
**How Might You Use these Strategies to Help Students with Varied Readiness Needs?**

- 
- 
- 

## Movie Time....



In Judy's Class, Look For:



Evidence of Connections with Students  
Uses of On-Going Assessment to Guide Planning  
Clarity about Learning Goals (Are they K's, U's  
or D's in this clip?)  
Ways in which Judy Addresses Students' Varied  
Readiness Needs  
Your Questions

# QUICK WRITE

## OPTION A:

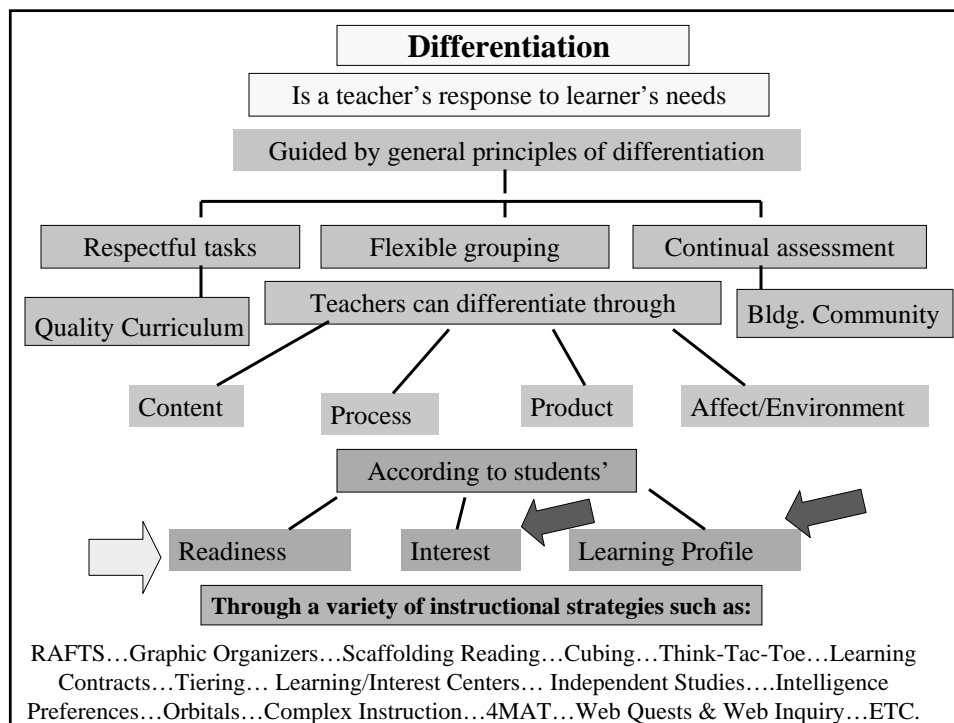
Write a note to Judy asking her questions to which you'd like answers after viewing the video.

## Option B:

Make a list of classroom processes & procedures you saw Judy use that you feel are important in addressing the cognitive & affective needs of her students.

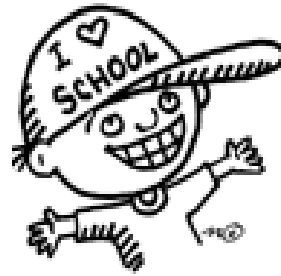
## OPTION C:

Jot down what you believe to be the **MOST** significant decisions Judy has made about teaching & learning. Be ready to explain them



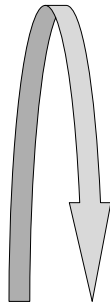
## Teachers at Work:

### Responding to Student Interests



### What's the Point?

Readiness



Growth

Interest



Motivation

Learning  
Profile

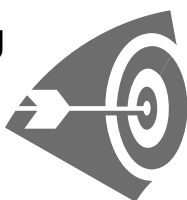


Efficiency



## Choice: A Great Motivator

- Math Problems
- Content Writing Prompts
- Where to Sit
- Order of Tasks
- Author Studies
- Work Alone or Together
- Vocabulary Words
- Modes of Product Expression
- Learning Goals
- Due Dates
- Modes of Assessment
- Partners
- Roles
- Product/Task Components
- Spelling Words
- Anchor Activities



Name: \_\_\_\_\_

**I WANT TO KNOW**

My Question or Topic is: \_\_\_\_\_

To find out about it, I will:



I will draw:

I will read:

I will write:

I will need:

I will look at/  
listen to:

How I will share what I learned is:

---



---



---

I will finish by: \_\_\_\_\_



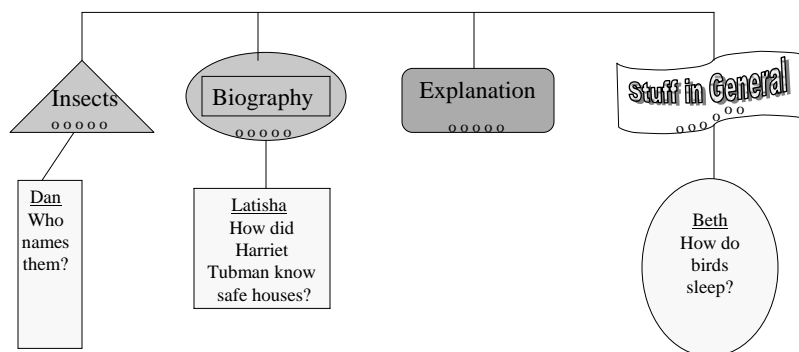
## Thinking About Student Interest

- 1) Personal Word Lists
- 2) Sustained Silent Reading  
Students identify interest areas  
Students select reading materials  
Teachers provide regular SSR time  
Students reflect on what they learned  
*Reading logs, Structured response, Varied representations*
- 3) Orbitals
- 4) Web Inquiry
- 5) Interest Centers
- 6) Expert Groups
- 7) Independent Studies
- 8) Biographical Inquiry
- 9) Mode of Expression Options
- 10) Design A Day
- 11) Group Investigation
- 12) Let's Make a Deal

Tomlinson '04

An Add-to Mobile  
based on class topics  
and general interests

### Who Cares?



Tomlinson • 01

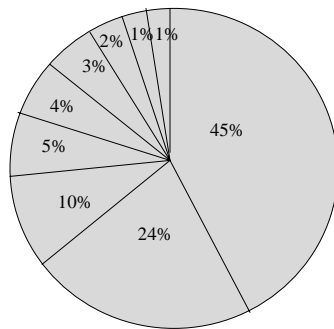
George Murphy's Biology Class  
Key Concepts: Energy, Action, Reaction



1. Introductory demonstration on key concepts
2. Students develop a hypothesis about the reaction they saw
3. Choices of ways to test their hypotheses
  - BMI Index computer activity
  - Complete additional experiments
  - Study guide w/ on-line resources
4. In end, all students develop and demonstrate an experiment that tests their hypotheses about how energy works
  - Students can work alone or with a partner
  - 4 question guides available for scaffolding

"This is the study of life. If my students can't see the connection between what we study and their own lives, I tell them to come to me and we'll figure it out together. If we can't, we probably shouldn't be studying it. It's not the standards that makes science relevant & vital for the students."

Spending A Million Dollars on My Dream: Tapping Interest in Math



I found out a million dollars is a lot of money. I was able to buy 8 horses instead of 4. This project Taught me a lot about horse farms and about math.

5<sup>th</sup> grade math project by Clara Hockman in *Teaching Reading in Social Studies, Science, & Math* by Laura Robb, New York: Scholastic, 2003, p. 174.

Category	Total	Fraction	Decimal	Percent
Land (40 acres)	\$240,000	$\frac{240,000}{1,000,000}$	0.240000	24%
Building Materials	\$450,000	$\frac{450,000}{1,000,000}$	0.450000	45%
8 Horses	\$40,000	$\frac{40,000}{1,000,000}$	0.040000	4%
Farm Equipment	\$100,000	$\frac{100,000}{1,000,000}$	0.100000	10%
Food (initial setup)	\$20,000	$\frac{20,000}{1,000,000}$	0.020000	2%
Horse Supplies	\$50,000	$\frac{50,000}{1,000,000}$	0.050000	5%
Farrier, Vet	\$16,000	$\frac{16,000}{1,000,000}$	0.016000	1.6%
2 Farm Hands	\$30,000			
Trainer	\$40,000			
Utilities	\$10,000			
Insurance	\$4,000			

## Differentiation By Interest

### Social Studies

Mrs. Schlim and her students were studying the Civil War. During the unit, they did many things -- read and discussed the text, looked at many primary documents (including letters from soldiers, diaries of slaves), had guest speakers, visited a battlefield, etc.

As the unit began, Mrs. Schlim reminded her students that they would be looking for examples and principles related to culture, conflict change and interdependence.



## Differentiation By Interest

### Social Studies (cont'd)

She asked her students to list topics they liked thinking and learning about in their own world. Among those listed were:

*music    reading    food    books*  
*sports/recreation    transportation travel*  
*mysteries    people    heroes/ villains*  
*cartoons    families    medicine*  
*teenagers    humor    clothing*



## Differentiation By Interest

Social Studies (cont'd)

Students had as supports for their work:

- *a planning calendar*
- *criteria for quality*
- *check-in dates*
- *options for expressing what they learned*
- *data gathering matrix (optional)*
- *class discussions on findings, progress, snags*
- *mini-lessons on research (optional)*



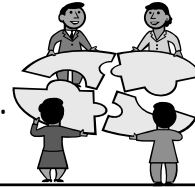
### Lessons from:

- Scott
- Geoff
- Felissa
- Amy

# With a Colleague, Please Discuss...

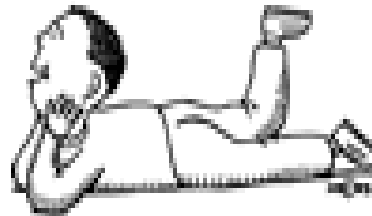
Ways in which you differentiate for student interest in your class.

Ideas you would like to try in your classroom to address interest more fully—  
& how you might use them.



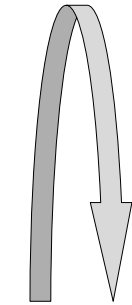
## Teachers at Work:

**Responding to  
Student  
Learning  
Profile**



## What's the Point?

**Readiness**



**Growth**

**Interest**



**Motivation**

**Learning  
Profile**

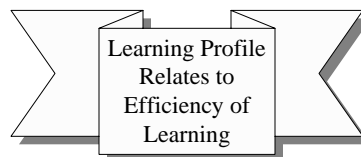
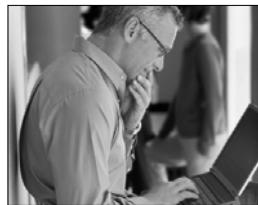


**Efficiency**

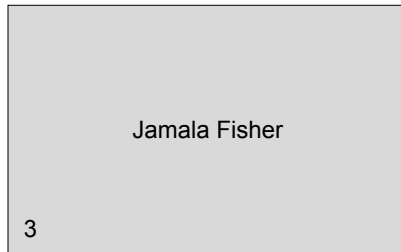
## What Shapes Learning Profile?

- Gender
- Culture
- Learning Style
- Intelligence Preference

(& the interaction of the four elements)



## Learner Cards

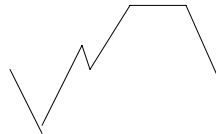


Front

<u>Rdg Level</u>	<u>Sch. Affil</u>
+321 – 123-	+ -
<u>Int</u> Soccer Mysteries Video Games	
<u>LP</u> Q/N V/A/K G/S A/P/C P/W	<u>S/P</u> ELL

Back

Tomlinson '03



## Fortune Lines

*Novels, plays, epic poems, music, history & other subjects all present a story that unfolds as a sequence of scenes or events.*

*Fortune lines probe learners' understanding of the story by requiring them to graph a pattern of events.*

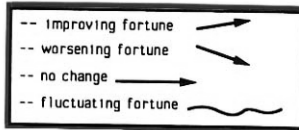
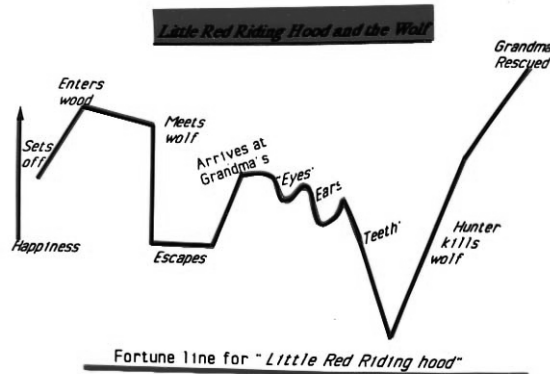
*For example, the story of little Red Riding Hood can be separated into ten scenes:*

Little Red Riding Hood sets off from home  
 Little Red Riding Hood enters woods  
 Little Red Riding Hood meets wolf  
 Little Red Riding Hood escapes from wolf, continues through wood  
 Little Red Riding Hood comes to grandma's cottage  
 'What big eyes you have'  
 'What big ears you have'  
 'What big teeth you have' wolf unmasks, pursues  
 Hunter enters, kills wolf  
 Grandma found unhurt in cupboard





One dimension that changes through the story is Little Red Riding Hood's peace of mind, or happiness. A child who understands the story might graph that dimension as shown:



Franklin Dukes standing by White & Gonsky

### Episodic Notes (Three-Square)

Name \_\_\_\_\_ Date \_\_\_\_\_  
Topic \_\_\_\_\_ Period \_\_\_\_\_

Purpose: Identify most important moments; show cause-effect and organization (sequences).

1. Determine the three most critical stages, scenes, or moments in the story or process.
2. Draw in the box what happens and what you "saw" in the text. Be as specific as possible.
3. Remember, these are notes, not works of art; try to capture the action and important details of the moment.
4. Explain (in the notes section) what is happening and why it is important.

Caption \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Caption \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Caption \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

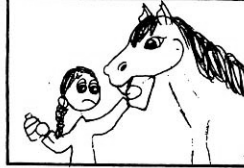
\_\_\_\_\_

Tools for Thought • Jim Burke • 2002

### Episodic Notes

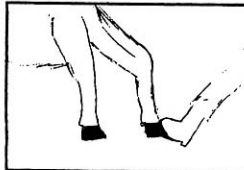
Name: <u>Cassie</u>	Date: <u>12/15</u>
Topic: <u>PAIN FOR A DAUGHTER</u>	Period: <u>6</u>

Purpose: Identify most important moments; show cause-effect and organization (sequence).  
 1. Determine the three most crucial stages, scenes, or moments in the story or process.  
 2. Draw in the box what happens and what you "see" in the scene as specific as possible.  
 3. Remember: these are notes not works of art. Try to capture the action and important details of the moment.  
 4. Explain (in the notes section) what is happening and why it is important.



Girl taking care of pony.

The girl was "too squeamish to pull a thorn from the dog's paw" but she loved her pony so much that she "trained the tail and secured it with hydrex or malle". She raised her bear in order to help the animal she loved. This moment is important because it represents the girl's emotional pain (raised her to see her horse's side).



Horse steps on girl's foot.

The same horse she nurtured and cared for like her own child stepped on her foot, making her "blind with pain". This is an important moment because it shows a change and represents the physical pain of the girl (her foot hurt).



Girl's foot being cleaned.

When her father begins cleaning her foot, the girl yells in pain saying "Oh my God, help me!" while this is happening, her mom is standing in the doorway, her daughter's cry brings her down because the girl is growing up and no longer comes to her mom in her work of struggle.

Tools for Thought • Jim Burke • 2002

## Intelligence Preference

Human brains are "wired" differently in different individuals. Although all normally functioning people use all parts of their brains, each of us is "wired" to be better in some areas than in others (Gardner, Sternberg).

Differentiation based on a student's intelligence preference generally suggests allowing the student to work in a preferred mode and helping the student to develop that capacity further.

Sometimes teachers also ask students to extend their preferred modes of working, or they opt to use a student's preferred areas to areas to support growth in less comfortable areas.



## 1<sup>st</sup> grade MI ordinal numbers



- Circle time – Teacher asked children the difference between cardinal and ordinal numbers . They thought of examples together & practiced both kinds.
- Next – approx  $\frac{1}{2}$  went to tables to work on writing and math tasks (practiced before)
- Remaining students divided into 4 groups for application tasks with the teacher.

## 4 Stations based on MI



- L/M – divide a long strip of paper into sections. Draw and label what you do 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> when you get up in morning
- VL – solve an ordinal problem (Beth ran in a race with 4 people last week. She didn't finish first or last. Bob finished 3<sup>rd</sup>. In what place did Beth finish?)
- V/S – use pattern blocks to make something that changes over time. Be ready to tell us what happens 1<sup>st</sup>, 2<sup>nd</sup>, etc in your even (larva, cocoon, butterfly)
- B/K - with teacher and arranged selves in order in a line at her direction with English and Spanish ordinals . Took turns giving directions.

## Differentiation Using MI

### 1. Skills Standards:

- Identify how the theme of a work represents a view or comment on life.
- Express understanding of theme through a variety of products

### 2. Concept:

- Heroism

### 3. Generalizations:

- Individual values and community values are often in conflict
- Heroes often reflect the values of a community
- Heroes are born in conflict

*Hertberg '03*

## Lesson Sequence: MI

- All students read  
“The Lottery” and “A&P”
- All students engage in Socratic Seminar:  
Students investigate the lesson  
generalizations through the stories:  
Do these generalizations hold up?
- Differentiated Activities according to  
intelligence preference (learning profile)

*Hertberg '03*

## Differentiation With MI

- **Verbal:** Think about your definition of heroism. Create a short story in which the main character is forced into a heroic role for which he or she is not naturally suited. Use the tools of an author to reflect the tensions inherent in your story.
- **Intrapersonal:** Create a grid with your characteristics of a hero in one column. Then write your qualities in the corresponding rows. Are you, by your own definition, a hero? Explore your heroic qualities. In what facets of life might you be a hero? Create a verbal means of expressing *your* heroism, creating a plan for how you might apply your heroic qualities to help others.

*Hertberg '03*

## Differentiated Activities: MI

- **Visual:** Create a visual representation of your concept of a hero. Make sure to consider all of the generalizations we have discussed. In a page, discuss what you created and how it reflects your definition of heroism. Be sure your visual representation conveys the impressions you want it to convey about the nature of heroism as you understand it.
- **Musical:** Relate the concept of heroism to the principles of harmony in music theory. Express the relationship in either the lyrics of a song, the music of a song, or both. In a page, discuss what you created and how it reflects your definition of heroism.

*Hertberg '03*

## Planet MI Task

V/L	L/M	M/R	B/K
Write a story about your planet	Make a chart that compares your planet to Earth	Make up a song about your planet	Make up or adapt a game about your planet (Saturn ring-toss, etc.)

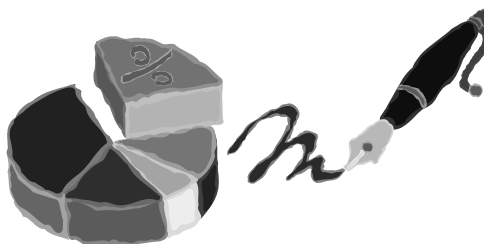


**Beware of Twinky MI**

### Using a Strength to Support a Weakness One Example

#### 100% Me poems

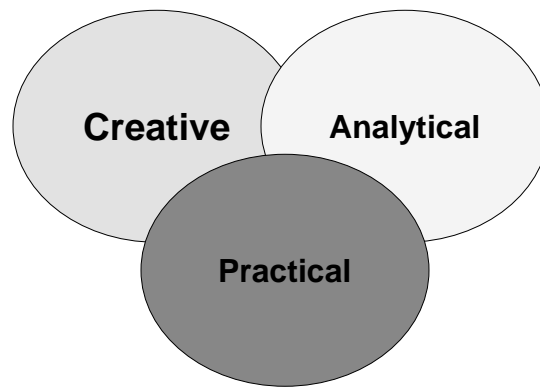
I'm 9% math  
 10% soccer  
 4% science  
 2% clean locker  
 I'm 21% wilderness  
 6% blue  
 I'm 6% braces  
 And 2% shoe  
 I'm 33% smiles 3% brown hair  
 4% pineapple  
 I'm very rare!



Kelsey—Grade 6

*In Practical Poetry: A Non-Standard Approach to Meeting Content-Area Standards*  
 By Sara Holbrook (2005), Portsmouth, NH: Heinemann, p. 79

## Sternberg's Three Intelligences



### Biology – A Differentiated Lesson Using Sternberg's Intelligences

#### Learning Goals:

Know - Names of cell parts, functions of cell parts

Understand - A cell is a system with interrelated parts

Do – Analyze the interrelationships of cell parts/functions

Present understandings in a clear, useful, interesting and fresh way.



*After whole class study of a cell, students choose one of the following sense-making activities.*

**Analytical:** Use a cause/effect chain or some other format you develop to show how each part of a cell affects other parts as well as the whole. Use labels, directional markers, and other symbols as appropriate to ensure that someone who is pretty clueless about how a cell works will be enlightened after they study your work.

Sternberg/Biology (cont'd)

**Practical:** Look around you in your world or the broader world for systems that could serve as analogies for the cell.

Select your best analogy (“best” most clearly matched, most explanatory or enlightening).

Devise a way to make the analogy clear and visible to an audience of peers, ensuring that they will develop clearer and richer insights about how a cell works by sharing in your work.

Be sure to emphasize both the individual functions of cell parts and the interrelationships among the parts.



Sternberg/Biology (cont'd)

**Creative:** Use unlikely stuff to depict the structure and function of the cell, with emphasis on interrelationships among each of the parts. You should select your materials carefully to reveal something important about the cell, its parts, and their interrelationships your ahas should trigger ours.

or

Tell a story that helps us understand a cell as a system with interdependent actors or characters, a plot to carry out, a setting, and even a potential conflict. Use your own imagination and narrative preferences to help us gain insights into this remarkable system. Students share their work in a 3 format – first triads of students who completed the same option, then triads with each of the 3 categories represented.



*This is then followed by a teacher-led, whole class discussion of cells as systems, then a “Teacher Challenge” in which the teacher asks students to make analogies or other sorts of comparisons between cells, cell parts, or interrelationships and objects, photos, or examples produced by the teacher.*



## Sternberg Intelligences in Social Studies



### Analytical

Analyze how and why the US population has shifted from a melting pot to a salad bowl or mosaic as it has assimilated new immigrants.

### Creative

Create two new metaphors to characterize how immigrants assimilated in the past and how they assimilate today. Write an explanation for each or create a visual to depict them.

### Practical

Think of the population of Charlottesville and Albemarle County. Is it better to assimilate new people to this area like a melting pot or a salad bowl? Defend your position.

## Understanding Number

### Analytic Task

Make a number chart that shows all ways you can think of to show 5.

### Practical Task

Find as many things as you can at school and at home that have something to do with 5. Share what you find with us so we can see and understand what you did.

### Creative Task

Write and/or recite a riddle poem about 5 that helps us understand the number in many, unusual, and interesting ways.

## Evaluating Plot

**Standard:** *Students will evaluate the quality of plot based on clear criteria*

### **Analytical Task**

• *Experts suggest that an effective plot is: believable, has events that follow a logical and energizing sequence, has compelling characters and has a convincing resolution.*

• *Select a story that you believe does have an effective plot based on these three criteria as well as others you state. Provide specific support from the story for your positions.*

OR

• *Select a story you believe has an effective plot in spite of the fact that it does not meet these criteria. Establish the criteria you believe made the story's plot effective. Make a case, using specific illustrations from the story, that "your" criteria describes an effective plot*

## Evaluating Plot

(cont'd)

### **Practical Task**

• *A local TV station wants to air teen-produced digital videos based on well known works. Select and storyboard your choice for a video. Be sure your storyboards at least have a clear and believable plot structure, a logical sequence of events, compelling characters and a convincing resolution. Note other criteria on which you feel the plot's effectiveness should also be judged. Make a case that your choice is a winner based on these and other criteria you state.*

### **Creative Task**

• *Propose an original story you feel has a clear and believable plot structure, a logical sequence of events, compelling characters, and a convincing resolution. You may write it, storyboard it, or make a flow chart of it. Find a way to demonstrate that your story achieves these criteria as well as any others you note as important.*

# A Science Example: *Migration*



•**Know:** animals' traits and needs

•**Understand:** that animals migrate in order to meet their needs.

•**Be able to:** trace an animal's migratory path and explain why it follows that pattern

- **Analytical** – Find two animals that share a similar migration pattern. Chart their similarities and differences. Be sure to include information on each animal's characteristics, habitat(s), adaptations, needs, migratory path, movement time frames, etc., as well as the reasoning behind these facts. Include an explanation as to why you think they share this pattern.
- **Practical** – National Geographic has asked you to research the migratory habits of \_\_\_\_\_ (your choice). They would like you to share your findings with other scientists AND to offer them recommendations about the best manner of observing in the future. Be sure to include information on the animal's characteristics, habitat(s), adaptations, needs, migratory path, movement time frames, etc., as well as the reasoning behind these facts. Include a "How To" checklist for future scientists to use in their research pursuits of this animal.
- **Creative** – You have just discovered a new species of \_\_\_\_\_. You have been given the honor of naming this new creature and sharing the fruits of your investigation with the scientific world via a journal article or presentation. Be sure to include information on this newly-discovered animal's characteristics, habitat(s), adaptations, needs, migratory path, movement time frames, etc., as well as the reasoning behind these facts. Include a picture of the animal detailed enough that other scientists will be able to recognize it.

Kristi Doubet 05

## Three States of Matter

Grade 2

**KNOW:** Three states of matter: solid, liquid, and gas

**UNDERSTAND:** All matter has both mass and volume.

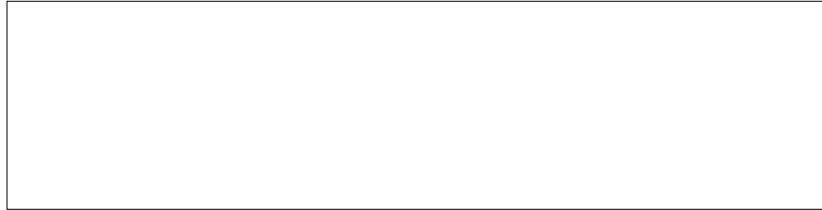
**DO:** Distinguish one state of matter from the others.

Show how one state of matter changes to the others.

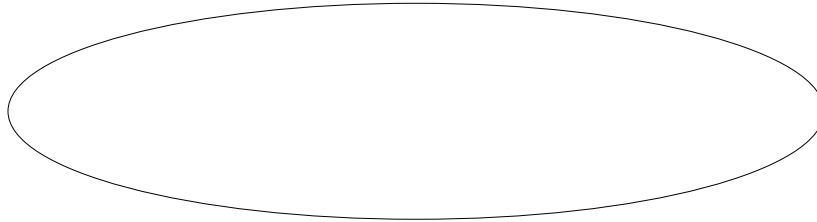
Analytical	<ul style="list-style-type: none"> <li>• Choose three items from our classroom that are all in different states of matter. Show how each item is in a different state of matter in comparison to other two items. Use terms like mass and volume to explain your answer.</li> <li>• Use the idea of water, ice, and vapor to create a chart to show how these 3 things change from one state to another. Include condensation, evaporation, melting point, and freezing point, expanding and contracting in your chart.</li> </ul>
Creative	<ul style="list-style-type: none"> <li>• Create three imaginative items to demonstrate different states of matter. Make an illustration of each item and explain why each one fits into the state it is in. Use mass and volume in your explanation.</li> <li>• Make a visually appealing poster to teach other second graders how each state changes into the other states. Be sure the way you teach is original. Show condensation, evaporation, melting point, and freezing point, expanding and contracting in your poster.</li> </ul>
Practical	<ul style="list-style-type: none"> <li>• There are three mysterious objects in a box on a museum shelf. Their states of matter are not yet identified. Your task is to figure out the state of matter for each one. Design a museum exhibit for the 3. Use the terms mass and volume in your exhibit signs.</li> <li>• There is a close friend of yours who does not understand how one state of matter changes into another. You want to help your friend out. Write out how you would explain to your friend using all these terms: condensation, evaporation, melting point, and freezing point, expanding and contracting. Make your explanation as clear as you can.</li> </ul>

## Putting the Ideas to Work

*Where Might You Use One of the Learning Profile Ideas?*



*Who Might Benefit from the Use? Why?*

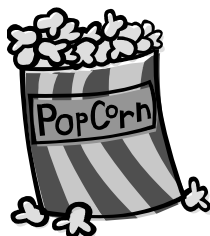


## Movie Time....



In Monica's Classroom, Look For:

Comfort with students  
Nature of the learning environment  
Clarity of learning goals  
The assessment/instruction connection  
Ways in which the teacher addresses learning profile (as well as readiness & interest)  
Also, note your own questions



## Teachers at Work: (Doing More than One Thing at a Time)

### Responding to Student Readiness, Interests, and Learning Profile



## Personal Agenda\*

Agenda for \_\_\_\_\_  
Starting date: \_\_\_\_\_

### Task

- \_\_\_\_\_ Complete a Hypercard Stack showing how a volcano works
- \_\_\_\_\_ Read your personal choice biography
- \_\_\_\_\_ Practice adding fractions by completing number problems and word problems on pages 101-106 of the workbook
- \_\_\_\_\_ Complete research for an article on why volcanoes are where they are for our science newspaper. Write the article and have the editor review it with you
- \_\_\_\_\_ Complete at least 2 spelling cycles.

### Special Instructions

- Be sure to show scientific accuracy
- Keep a reading log of your progress
- Come to the teacher or a friend for help if you get stuck
- Watch your punctuation and spelling! Don't let them hurt your great skill at organizing ideas.

## The Good Life... Making Choices About Tobacco Use

### All Products Must...

- ✓ Use key facts from class and research
- ✓ Make a complete case
- ✓ Provide defensible evidence for the case
- ✓ Weigh varied viewpoints
- ✓ Be appropriate/useful for the target audience
- ✓ Give evidence of revision & quality in content & presentation
- ✓ Be though-provoking rather than predictable



#### **VISUAL**

- Story boards for TV "ad" using few/no words to make the point
- Comic book parody with smoking super heroes/heroines

#### **KINESTHETIC**

- Pantomime a struggle of "will" regarding smoking – including a decision with rationale
- Act out a skit on pressures to smoke and reasons not to smoke

#### **WRITTEN**

- Brochure for a pediatrician's office – patients 9-16 as target audience
- Research and write an editorial that compares the relative costs and benefits of tobacco to NC – submit for publication

#### **ORAL**

- Radio-spot (public information with music timed, lead-in)
- Nightline (T. Koppel, C. Roberts with teen who smokes, tobacco farmer, tobacco CEO, person with emphysema)

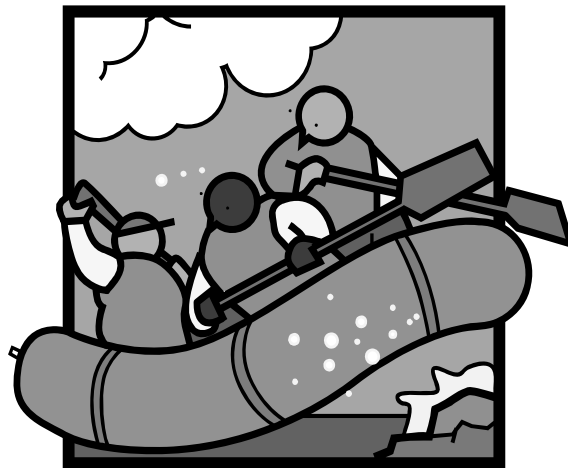
## **R.A.F.T.**

**Role**

**Audience**

**Format**

**Topic**



## A RAFT is...

- ... an engaging, high level strategy that encourages writing across the curriculum
- ... a way to encourage students to...
  - ...assume a role
  - ...consider their audience, while
  - ...examine a topic from their chosen perspective, and
  - ...writing in a particular format
- All of the above can serve as motivators by giving students *choice*, appealing to their *interests* and *learning profiles*, and adapting to student readiness levels.

## RAFT:

ROLE	AUDIENCE	FORMAT	TOPIC

## Sample RAFT Strips

	Role	Audience	Format	Topic
Language Arts	Semicolon	Middle School	Diary Entry	I Wish You Really Understood Where I Belong
	N.Y. Times	Public	Op Ed piece	How our Language Defines Who We Are
	Huck Finn	Tom Sawyer	Note hidden in a tree knot	A Few Things You Should Know
Science	Rain Drop	Future Droplets	Advice Column	The Beauty of Cycles
	Lung	Owner	Owner's Guide	To Maximize Product Life
	Rain Forest	John Q. Citizen	Paste Up "Ransom" Note	Before It's Too Late
History	Reporter	Public	Obituary	Hitler is Dead
	Martin Luther King	TV audience of 2010	Speech	The Dream Revisited
	Thomas Jefferson	Current Residents of Virginia	Full page newspaper ad	If I could Talk to You Now
Math	Fractions	Whole numbers	Petition	To Be Considered A Part of the Family
	A word problem	Students in your class	Set of directions	How to Get to Know Me

Format based on the work of Doug Buehl cited in [Teaching Reading in the Content Areas: If Not Me Then Who?](#), Billmeyer and Martin, 1998

## Sample RAFT Strips

Role	Audience	Format	Topic
Gingerbread Man	Our Class	Oral Response	I never should have listened to the fox
Squanto	Other Native Americans	Pictographs	I can help the inept settlers
Band Member	Other Band Members	Demo Tape	Here's how it goes
Positive Numbers	Negative Numbers	Dating Ad	Opposites Attract
Rational Numbers	Irrational Numbers	Song	Must you go on forever?
Decimals	Fractions	Poem	Don't you get my point?
Perimeter	Area	Diary Entry	How your shape affects me
Monet	Van Gogh	Letter	I wish you'd shed more light on the subject!
Joan of Arc	Self	Soliloquy	To recant, or not to recant; that is the question
Tree	Urban Sprawl	Editorial	My life is worth saving
Thoreau	Public of his day	Letter to the Editor	Why I moved to the pond
Young Chromosome	Experienced Chromosome	Children's Book	What becomes of us in mitosis?
First Grader	Kindergartner	Ad	What's best about 1 <sup>st</sup> grade?



## RAFT Strips, cont'd

Role	Audience	Format	Topic
Hal (Henry V, Part 1)	Self	Diary Entry	My friend Falstaff-past, present, future
Magnet	First Graders	Letter	Here's what I'm attracted to...
Transparency	Slide Show	Personal Ad	Spruce up your presentation
LBJ	Viet Nam Vet	Apology Letter	What was I thinking...
Computer	Fifth Graders	Flow Chart	Turning data into a graph with EXCEL
P Waves	S Waves	Dear John Letter	Why we have to stop seeing each other
Carbon Atom	Hydrogen Atom	Personal Ad	Atom seeking atom
A Variable in an Equation	Real Numbers	Ad for the Circus	What is my value in the balancing act?
Return Key	Middle Schoolers	Captain Kirk's Bulletin to his crew	When to beam to another paragraph
Conductor	The Band	Mime	How to play this style of music
Basic Multiplication Fact	Basic Division Fact	Invitation to a family reunion	Here's how we're related

## Grade 6 Social Studies RAFT

Students will

Know:

Names and roles of groups in the feudal class system.

Understand:

Roles in the feudal system were interdependent. A person's role in the feudal system will shape his/her perspective on events.

Be Able to Do:

Research

See events through varied perspectives

Share research & perspectives with peers



# Feudal System Raft

cont'd

Role	Audience	Format	Topic
King	The Subjects	Proclamation	Read My Lips, New Taxes
Knight	Squire	Job Description	Chivalry, Is it for You?
Lord	King	Contract	Let's Make a Deal
Serf	Animals	Lament Poem	My So Called Life
Monk	Masses	Illuminated Manuscript	Do As I Say, Not As I Do
Lady	Pages	Song	ABC, 123

Following the RAFT activity, students will share their research and perspectives in mixed role groups of approximately five. Groups will have a "discussion agenda" to guide their conversation.

-Kathryn Seaman

## AP Statistics RAFT

### Characteristics of Discrete and Continuous Random Variables

#### Know:

- Definitions of discrete and continuous random variables
- What graphs of discrete and continuous random variables look like

#### Understand:

- Discrete and continuous random variables have distinct, identifiable attributes.

#### Be Able to Do:

- Look at a graph and identify whether it represents discrete or continuous random variables
- Interpret a word problem to determine whether it involves discrete or continuous random variables
- Draw a probability histogram of discrete and continuous random variables



### Directions for the RAFT ACTIVITY

Students will pick one of four RAFT groups located in the four corners of the room, with the understanding that the groups must have equal numbers of participants.

Students will work with their groups for 30 minutes to develop their RAFT assignment. During the last 15 minutes of class, students will meet in groups of 4 that contain a representative of each of the RAFT strips to present their work and see the other formats (2-3 minutes each).

The teacher will move around the class and may select one example of each strip for presentation at the beginning of the next day's class.

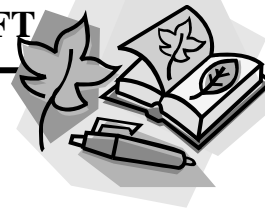


### The RAFT Activity

Role	Audience	Format	Topic
Recruiter for continuous random variables	Discrete random variables	Persuasive campaign to join continuous RV	Why it's worth your while to become a continuous RV
Recruiter for discrete random variables	Continuous random variables	Persuasive campaign to join discrete RV	Why it's worth your while to become a discrete RV
Bounty Hunter	Variable population	Wanted posters for discrete and continuous random variables	Here's what to look for
Designer	AP Stats Students	A design representing discrete and continuous random variables	Here's the plan

Kathie Emerson, Timberline High School, Boise, ID

## High School Biology RAFT



**Know:** (See terms below the RAFT)

**Understand:**

Plants and animals have a symbiotic relationship with photosynthesis and respiration.

Photosynthesis and respiration are essential to human life.

**Be Able to Do:**

Explain the relationship between photosynthesis in plants and respiration in humans

Explain and connect the equations for photosynthesis and respiration

Explain the nature of human dependence on plants

ROLE	AUDIENCE	FORMAT	TOPIC
An animal of your choice	A plant of your choice	Song	Why I am grateful to you
Trees & shrubs in the local park	Real Estate Developer	Numbered List	Our needs, why you should care, and what you should do about them
Athlete	Coach	Letter (with sketches, if you'd like)	For better or worse: What plants have to do with my performance this year
High school biology student	3 <sup>rd</sup> Grader	Annotated diagram	What plants have to do with you
Scientist preparing for a Mars mission	Financial backers for the trip	Presentation	Plants—and plant substitutes: The unsung heroes of the mission
A kid	Mom	Conversation	The lettuce is turning yellow! Are we threatening the balance of nature?!

**Important Terms:** photosynthesis, respiration, carbon dioxide, sunlight, blue light or green light (or other colors), sugar, water, mitochondria, chloroplast, stoma (stomata), lactic acid, aerobic respiration, anaerobic respiration, autotroph, heterotroph, sunny, cloudy, cool, warm, long sunny days, short days, lungs, light energy, food energy

*Annette Hanson, Timberline High School, Boise, Idaho*

## Fractions RAFT

ROLE	AUDIENCE	FORMAT	TOPIC
Fraction	Whole Number	Petition	To be considered part of the family
Improper fraction	Mixed numbers	Reconciliation letter	We're more alike than different
A simplified fraction	A non-simplified fraction	Public service announcement	A case for simplicity



5<sup>th</sup> grade team\*Free Rock Elementary\*Brighton, NY

## Fractions RAFT

ROLE	AUDIENCE	FORMAT	TOPIC
GCF	Common factor	Nursery rhyme	I'm the greatest!
Equivalent fractions	Non-equivalent	Personal ad	How to find your soul mate
LCM	Multiple sets of numbers	Recipe	The smaller the better
Like denominators in addition problems	Unlike denominators in addition problems	Application form	To become a like denominator



5<sup>th</sup> grade team\*Free Rock Elementary\*Brighton, NY

## Fractions RAFT



ROLE	AUDIENCE	FORMAT	TOPIC
A mixed number that needs to be renamed to subtract	5 <sup>th</sup> grade math students	Riddle	What's my new name?
Like denominators in subtraction problems	Unlike denominators in subtraction problems	Story board	How to become a like denominator
Fraction	Baker	Directions	To double the recipe
Estimated sum	Fractions/ mixed numbers	Advice column	To become well-rounded

5<sup>th</sup> grade team\*Free Rock Elementary\*Brighton, NY

## RAFT ACTIVITIES as Assessments

Role	Audience	Format	Topic
Fraction	Whole Number	Invitation to a family reunion	Here's how we are related
Equivalent Fraction	Boys-Men	Model	All pizza are created equal
Fractions & Mixed Numbers	Middle Schoolers	Persuasive Letter	You can't live without us
Improper Fractions	Mixed Numbers	Ad for a circus	What is my value in the balancing act?
Dinner for 2	Family of 4	Recipe	Yours,Mine & Ours
Mixed number Subtrahend	Mixed number minuend w/ regrouping	Song	You can't take that away from me



# Forces



- ❖ Directions: For this assignment, you are to explain and show me what you know about forces. You may use any life experiences, notes, lab sheets, or lab books as references.
- ❖ Select an Assignment: Your first job is to decide which RAFT assignment you want to do. When reading the chart, make sure to read it going across by rows.
  1. Look at the first column of roles. A role is the person who you are pretending to be. Select a role that interests you.
  2. Read the audience that goes along with that role. The audience is whom you are writing to or creating your work for.
  3. The format column tells you the way in which you will express your understanding of the topic.
  4. Format is the form in which your assignment should be presented.
- ❖ Brainstorm Ideas: After you select your assignment, you will meet with other students who have selected the same assignment. Your group will brainstorm ideas for 5-7 minutes, and these ideas will help you to complete the assignment.
- ❖ Write: After the brainstorming period, you will individually write, draw, or illustrate your answer for the assignment. When you have completed your draft copy, you can meet with a partner to review and revise your work. Later, you will also have the opportunity to share your product with students who selected other assignments.
- ❖ Requirements
  - ❖ Be sure to use the vocabulary words in your writing that relate to forces, such as force, elastic, stretch, compress, motion and Newton.
  - ❖ All sentences must be complete sentences.
  - ❖ Everyone must turn in his or her own RAFT assignment. Although you can brainstorm for ideas with classmates, you must complete the assignment independently.



# Forces



Developed by Bryon Adams, 6<sup>th</sup> grade teacher, City View Community School, Minneapolis, MN

Role	Audience	Format	Topic
Bungee Cord	Person in line at a fair or amusement park	Storyboard, comic strip, or diagram with captions	How I give people a jump that never seems to end.
Sixth grader	Second grader	Science newsletter	Let me introduce you to forces all around you.
Teenager	Parents and Teachers	Journal entry	If you understood force, you'd understand my life.
Athlete	Spectators of Fans	Interview with a TV sportscaster	You may not know it, but sports are all about force.
Shoe Company	Consumer or Customer	Ad or commercial	Extreme Forces: The Magic in your sport shoes.



## 4<sup>th</sup> Grade Math RAFT Assignment: Parts of a Whole

- As a result of their work, students should
  - Know
    - Definition of fraction, part, whole, decimal, and percent.
  - Understand
    - Parts of whole can be represented in different ways.
    - Fractions represent parts of a whole (Group A).
    - Equivalent fractions are equal but are represented by different numbers (Group B).
    - Fractions and decimals are related and represent parts of a whole (Group C).
    - Fractions, decimals, and percents are all ways to represent parts of a whole (Group D).
  - Be able to
    - Illustrate fractions as parts of a whole.
    - Find equivalent fractions.
    - Convert fractions to decimals.
    - Convert decimals to percents.



## 4<sup>th</sup> Grade Math RAFT Assignment: Parts of a Whole

### Background

- At the start of this math unit, I administered a pre-assessment of fraction skills and used the data from the pre-assessment to form groups on the basis of readiness levels. As the unit proceeds, students' grouping assignments may be adjusted on the basis of their progress.
- In the lesson before the RAFT assignment, the students read ***Among the Odds and Evens***, and, as a whole class, discussed relationships and the questions, What if numbers could communicate? Then the students worked in readiness-based groups.
  - *Group A read Fraction Fun and discussed how fractions represent parts of whole.*
  - *Group B worked with fractions sticks to find equivalent fractions. They also used the mathematical formula for finding equivalents using both multiplication and division.*
  - *Group C converted a predetermined set of fractions to decimal form, then to percents, and discussed the procedures.*
  - *For this RAFT, students are assigned to a specific task. Students in Group A are assigned to the task in row 1, Group B to row 2, Group C to row 3, and Group D to row 4.*



## 4<sup>th</sup> Grade Math RAFT Assignment: Parts of a Whole

### Directions

- Group A: Your goal is to communicate that fractions represent parts of whole.
  - You are write a children's book similar to Fraction Fun using both text and illustrations. Brainstorm some ideas together. Do not use the same fraction over and over again, and keep in mind that each fraction is speaking to the whole it is a part of. You will be asked to share your books with the other groups.
  - Materials: paper, pencil, crayons, colored pencils
- Group B: Your goal is to communicate that equivalent fractions are equal and can be expressed by using different numerators and denominators.
  - You are to fill out the invitation, keeping in mind that you are a fraction inviting one or more of your equivalents to the ball. Brainstorm some possible fractions and their equivalents with your group. Try to be creative and use as many equivalents as possible when thinking about where and when the ball will be held. Use the fraction tiles if you need ideas. Your mask should be colored to represent the equivalent you are inviting, and no two invitations and masks should be exactly the same. Then write a letter about why certain fractions were invited and why others were not. You will be asked to share your final product with the other groups.
  - Materials: invitation template, mask, pencil, crayons, colored pencils, fraction tiles

## 4<sup>th</sup> Grade Math RAFT Assignment: Parts of a Whole



### Directions

- Group C: Your goal is to communicate that fractions and decimals are related and represent parts of wholes. There is a decimal representation for each fraction.
  - You will quickly convert several fractions into their decimal forms. You may use a calculator or your dry erase boards. Choose your fraction and fill out the wanted poster, keeping in mind that you are the fraction and your are describing your decimal number. Your illustration should show your fraction, but your writing should describe your decimal. You will be asked to share these with the other groups.
  - Materials: calculators, dry erase boards and markers, wanted poster template, pencil, crayons, colored pencils
- Group D: Your goal is to communicate that fractions can be represented as a decimal and a percent.
  - You will begin by converting several fractions to decimals and then to percents. Use a calculator or your dry erase board. Choose the fraction and dress your paper people as a visual representation of the conversions. Then write a short story on notebook paper about the changing wardrobe. You will be asked to share your work with the other groups. Materials: calculators, dry erase boards and markers wanted poster template, pencil, crayons, colored pencils
  - Materials: calculators, dry erase boards and markers, notebook paper, paper person templates, crayons, colored pencils

Developed by Michelle Krolkowski, 4<sup>th</sup> grade teacher, New Castle Elementary School, Virginia Beach, VA

### 4<sup>th</sup> Grade Math RAFT Assignment: Parts of a Whole

Role	Audience	Format	Topic
Fractions	Whole numbers	Children's book	Do you want a piece of me?
Equivalent fractions	Equivalent fractions	Invitation/Mask	Invitations to the Masquerade Ball
Fraction	Decimal	Wanted Poster	Alias – reveal your secret identity!
Fraction, decimal, percent	Percent	Paper people	Dress up! Change your wardrobe to change your form.

## Self Portrait RAFT High School Art

Students will

Know:

- Characteristics of self portrait
- Appropriate use of artistic materials
- Principles of Design
- Definition of artistic expression

Understand:

- Each artist has a personal style
- Personal style reflects the individual's culture, time, and personal experiences.
- Use of materials and style are related

Be Able to Do:

- Analyze an artist's personal style and use of materials
- Create a facsimile of an artist's personal style and use of materials



# Self Portrait RAFT

Role	Audience	Format	Topic
Norman Rockwell	Masses	Illustration	What You See is What You Get
Van Gogh	Self	Oil Painting	Can I Find Myself In Here?
Andy Warhol	Someone you want to know the true you	Photograph	Now you see Me, Now you Don't
Rueben	Self	Oil Painting	Props Make the Person
Goya	School	Charcoal	On the Side, but Central

## RAFT Assignments Grade 10 English

Know: Voice, Tone, Style

Understand:

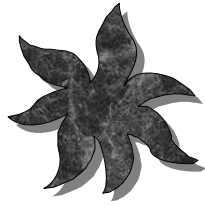
- Every writer has a voice
- Voice is shaped by life experiences and reflects the writer
- Voice shapes expression
- Voice affects communication
- Voice and style are related

Be Able to Do:

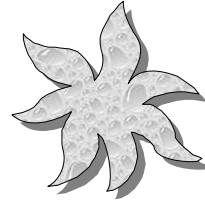
- Describe a writer's voice and style
- Mimic a writer's voice and style
- Create a piece of writing that reflects a writer's voice and style



Role	Audience	Format	Topic
Edgar Allen Poe	10th grade writers	Letter	Here's how I found my voice
Garrison Keillor	10th grade writers	E mail	Here's how I found my voice
Emily Dickinson	Self	Diary entry	Looking for my voice
10th grader	English teacher	Formal request	Please help me find my voice
Teacher	10th graders	Interior monologue	Finding a balance between voice and expectations
3 authors	The public	Visual symbols/logos annotated	Here's what represents my voice
3 authors from different genre	One another	Conversation	What shaped my voice and style



# PLANT RAFT



ROLE	AUDIENCE	FORMAT	TOPIC
Plant Parts	Plant needs	Picture	We're made for each other
Roots	Stem, leaf, flower, seeds	Letter	You'd be lost without me
Flower	Stem, leaf, seeds, roots	Ad	I'm more than just a pretty face

ROLE	AUDIENCE	FORMAT	TOPIC
Seeds	Flower, leaf, stem, roots	Song or poem	Here's where you got your start
Stem	Flower, leaf, seeds, roots	Chart	Why you can't do without me
Leaf	Stem, seeds, flower, roots	3 riddles	Why I'm important to you



\* Share RAFTS in mixed groups

\* Draw or build something to prove that a plant is well made to have all its needs met

**Caroline Cunningham Eidson**